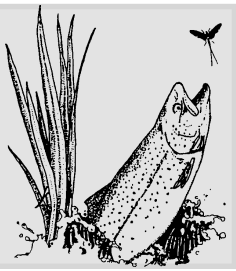
Stream Advocate



Adopt-A-Stream Program Newsletter *Fall 2003*

ROADS AND RIVER CONTINUITY: EVALUATING FISH AND WILDLIFE PASSAGE AT CULVERTS AND BRIDGES

Q. Why did the fish cross the road?
A. Because it couldn't swim through the culvert.
As part of the River Continuity pilot project, Stream Team volunteers in western and central Massachusetts are identifying road crossings along streams and rivers that block or inhibit fish and wildlife movement and passage. As Riverways and our partners continue to refine the field observation process and protocols, we would like to involve more Stream Teams and volunteers throughout Massachusetts in the effort. Roads can have far-reaching adverse impacts on our ecological infrastructure. Road building and widening can represent not only a loss of natural riverine and wetland habitat but also can fragment the aquatic landscape. Fortunately, it is often possible to reduce if not completely eliminate the adverse impacts of road crossings on fish and wildlife movement. This is the ultimate goal of restoring River Continuity.

We have all seen how roads and the associated traffic and development can disconnect wildlife populations by slowing or halting movement through the landscape (as evidenced by the roadkill we see along our highways). This fragmentation can also be a problem for species that must move in and along the stream and river corridors. By spreading the flow out to just a few inches deep, or by constricting the stream flow to a high velocity, poorly designed culverts may prevent organisms from swimming or floating to critical upstream or downstream spawning, nursery, or feeding habitats. Additionally, when wildlife species (mink and turtles for example) are prohibited from moving in and along the stream corridor by long dark culverts, they are forced to go up and over the road, where deadly traffic may await them. Growing sustainably means building and upgrading roads that not only pass people efficiently and safely on roads across streams and rivers, but also pass fish and wildlife efficiently and safely through and under those roads.

Surveying stream crossings

Over the past two years, **River Continuity** has been addressing the impact of roads on our streams by developing a volunteer stream crossings survey protocol, mapping and analyzing stream and roads data. Riverways' initial mapping efforts show an estimated 29,000 road-stream crossings. This is likely an underestimate due to incomplete data on all roads and streams.

With so many stream and river crossings, no local state or federal agency could ever manage to inventory these stream crossings alone. Therefore, a key focus of the River Continuity Project has been to develop methods that will help tap the skills, energy, and local expertise of volunteers. Through the combined efforts of the Riverways Adopt-A-Stream program and the UMASS Extension/Mass. Water Watch Partnership, many volunteers have helped to pilot the stream crossings survey in local streams, in-

continued

Volunteer River Continuity Surveyor, on Moose Brook in Hardwick, evaluating a culvert that creates an unnatural streambed.

Stream Team Implementation Awards available for the Housatonic and SuAsCo Watersheds

The Adopt-A-Stream Program is announcing Stream Team Implementation Awards for Stream Team work in the SuAsCo and Housatonic Watersheds. The awards can be used by existing Stream Teams to implement projects or by local watershed associations or municipal boards to help start new Stream Teams. In both watersheds, where Stream Teams are well established, priority will be given to implementation projects. Current Stream Teams should focus on implementing projects from their Action Plan. The Adopt-A-Stream Program can also work with these Stream Teams to provide additional technical assistance on the projects.

Awards will range from $500 to $2,000. All projects must be completed by June 30, 2004. The awards are a reimbursement for services basis. Applications must be submitted through a qualified 501c3 organization or a municipality. Stream Teams are encouraged to work in partnership with their town Conservation Commission or Planning Board, watershed association, land trust, etc.

Stream Teams are encouraged to contact the Adopt-A-Stream Program to discuss project ideas before the release of the mid-October Request for Responses. See the article in this newsletter for examples of last years' grant projects in the Ipswich and Parker Rivers Watersheds. When available, the RFR will be available from the website at www.massriverways.org.

cluding Stream Teams along Prince River (Barre), Moose Brook (Hardwick and Barre) and Pecousic Brook (East Longmeadow), as well as surveys along Mill Brook (Northfield), Munn Brook (Granville), Keyup Brook and Jacks Creek (Erving), and portions of the Tully River. These pilot surveys have yielded information on the culverts and bridges and on the process and the follow-up protocols of the survey, inventory and evaluation.

After a short indoor training, similar to the Shoreline Survey training, volunteers are assigned sections of stream to survey and then congregate at a stream crossing to conduct a "hands-on" training before being dispersed to their assigned crossings. At each road crossing, volunteers are asked to assess the stream and crossing characteristics based on a number of criteria, including the dimensions and condition of the culvert and the substrate and flow of the stream. The information collected will become part of a statewide database of road crossings. On the local level, groups will use the information gathered in a summary report to help local highway departments and conservation commissions with planning and maintenance decisions. For example, the Westfield River Watershed Association has already begun to survey sub-basins in the Westfield River Watershed and plans to use the information to identify the structures that cause the most significant fragmentation and then lobby town and state DPWs to replace or modify those structures.

River Continuity is aimed at reducing local impediments to passage and movement of fish, wildlife and other aquatic life that require instream passage. Volunteers conduct surveys to identify problem culverts and bridge crossings.

Riverways/Adopt-A-Stream/UMASS Extension would like to expand River Continuity Surveys to other watersheds throughout the Commonwealth. Volunteers play an invaluable role in identifying problems and advocating locally for a better culvert design. If your Stream Team is interested in this issue please contact the Adopt-A-Stream Program 617-626-1549, or Carrie Banks, Western Mass Stream Team Organizer, at 413-773-5031 for more information.

To view the full River Continuity article in the Riverways August News Notes, go to www.massriverways.org

The River Continuity Project is a cooperative project of the Riverways Programs and the UMass Amherst Dept. of Natural Resources Conservation, led by Scott Jackson. Over the past two years the project has received additional funding from the Massachusetts Watershed Initiative.

Blocked culverts collect debris and restrict flow and passage for fish and other instream critters.

A drop between the culvert and the streambed makes the culvert impassable for fish and all organisms that live in the streambed.

Upper Taunton Wild & Scenic River Study Tributary Surveys

The Adopt-A-Stream Program has been working in partnership with the Taunton River Wild and Scenic study committee to complete shoreline surveys of four Upper Taunton River tributaries. The study committee decided that shoreline surveys would be a great way to identify in four major tributaries some of the outstandingly remarkable characteristics that have been found in the mainstem of the Upper Taunton River. The tributaries are critical to the ecology, recreation, and management of the 22-mile mainstem of the Upper Taunton. These shoreline surveys will also help to develop a strong coalition of municipalities, citizens, non-profits and agencies for implementing the education, land-use, recreation and conservation strategies for the Upper Taunton River.

Local contacts, including town officials, river activists and river abutters have formed steering committees on each of the four tributaries, the Town River in Bridgewater and West Bridgewater, the Forge River in Raynham, the Nemasket River in Middleborough, and the Winnetuxet River in Halifax and Plimpton. The steering committees are being led by two local organizers hired for the project by the National Park Service through the Southeast Regional Planning and Economic Development District (SRPEDD). These local organizers are also working closely with Adopt-A-Stream staff to train the volunteers, lead the surveys and plan followup actions.

Two shoreline surveys have been completed this summer on the Forge River and the Town River, and planning has begun for the Nemasket and Winnetuxet Rivers. The first two surveys have been met with excitement from the volunteer participants many of whom have spent years canoeing and enjoying the local rivers. The volunteers have brought a range of experience, with some just learning about the rivers and some with extensive local knowledge. These surveys included the entire reach of both the Town and Forge Rivers, going beyond what is considered the "free-flowing" sections or above the first dam on the rivers. Each steering committee thought that it would benefit town and local planning efforts to include the entire river and to advocate for its protection through a visual survey and action plan.

In addition to identifying both outstanding values and problem areas for protection or mitigation, the data gathered and the recommendations made by local volunteers and municipal offiials will be included in the Wild and Scenic Management Plan that isto be written by the Wild and Scenic Study Committee.

Northeast Stream Teams: Recent Projects

At our October Stream Team Workshop in Middleton, we will hear from three Stream Teams about projects they have recently completed on behalf of their river. We will also get a chance to hear from other groups about activities and to discuss ideas for river protection. Here are some highlights of the projects we will hear about.

Last fall, the Adopt-A-Stream Program was able to present stream team small grants through funding from the Watershed Initiative in two watersheds, the Parker and Ipswich. Grants were given to the Reading/North Reading Stream Team for a rain barrel project, the Middleton Stream Team for canoe access and the Parker River Clean Water Association to start two Stream Teams in Georgetown and Newbury.

Reading / North Reading- Rain Barrels

The stressed condition of the Ipswich River, named by American Rivers as the third most endangered river in 2002, has been a focus for the Reading North Reading Stream Team since its Shoreline Survey and action plan in 1996. In dry years, partly due to rainfall and partly because of water use, the mainstem has dried up. In order to decrease outdoor use of water, the Reading/North Reading Stream Team received Stream Team small grant funds to conduct a rain barrel revolving fund and demonstration project in the towns of Reading and North Reading. A subsidized rain barrel revolving fund was set up in North Reading and a pre-paid rain barrel project was done in Reading.

The Stream Team partnered with the Town of North Reading Water Department in applying for the grant and in the North Reading project. In Reading, the Stream Team partnered with the Ipswich River Watershed Association (IRWA) and with the Department of Public Works (DPW). The goals of the projects were three-fold: to reduce summer water withdrawals, to encourage water conservation, and to provide a model for other towns to follow.

Fifty rain barrels were sold in North Reading where the Water Department purchased barrels with grant money and used the income from the sale of the barrels at a reduced price ($50 vs. $60 wholesale price) to purchase additional barrels until funds ran out. Demonstration barrels were placed at the town hall and the library along with literature about the barrel and water conservation.

Volunteers planting a river buffer along Sawmill Brook in Manchester.

In Reading, people placed orders for rain barrels at $10 above the wholesale price. Order forms were available at a variety of locations and demonstration barrels were used here as well. One barrel was used at community events including a town-wide election. A total of 84 barrels were sold in Reading through pre-paid orders. Barrels were delivered to the DPW for purchasers to pick up on a Saturday. To hear about tips for doing a similar project, and lessons learned, come to the Stream Team Workshop in Middleton (Oct. 1st) or call Adopt-A-Stream staff.

Middleton- Building a Canoe launch and fishing site

The Middleton Stream Team has successfully designed and built two beautiful canoe launches on the Ipswich River in the last two years through a grant and with extensive donations of both materials and volunteer time. The first site, on Main Street/Rt. 114, opened in June 2002 on town land. A second canoe launch downstream, recently completed on Peabody Street, was partially funded through a Stream Team small grant. Improvements on this site, on state land, will create a formal canoe launch area with stone steps to reduce erosion of the bank, and establish a turn around area and picnic site. Working in partnership with local businesses and contractors, the Stream Team received substantial donations of services and materials. Work on the site was completed by volunteers and with thanks to town employees and the DPW providing the heavy labor and equipment. With the support of Adopt-A-Stream staff, the Stream Team is working with the Public Access Board to bring both sites onto the PAB system, which will take care of long term site maintenance.

The Team has received donations of picnic tables and offers from local scout troops to plant flowers for these new conservation areas and design an informational nature area at the Main Street site. Other recently completed projects by the Stream Team include a display for the post office with maps of the sub-basin and area conservation activities, and installation of stream markers at the crossings throughout town.

Sawmill Brook / Manchester Stream Team- Riparian Buffer Planting

With the assistance of Salem Sound Coastwatch and the Manchester Stream Team, the Town of Manchester received partial funding of a Riverways Small Grant to enhance and improve an area of riparian buffer, which they had cleared of invasive species. The town sought additional funding for planting materials and received a $500 donation from Manchester Friends of Trees. Volunteers planted over 100 trees, shrubs and wildflowers at the site. Educational materials on the environmental benefits of riparian buffers have been distributed to abutting landowners and others by the Manchester Stream Team.

Native plantings were chosen for the site including sugar maple, silky dogwood, blueberry, winterberry, elderberry, sweet fern and cardinal flower. They were chosen because they fit the site conditions, would eventually provide shade to the stream to enhance smelt habitat, and because they provide food value for wildlife.

Adopt-A-Stream Announces New Technical Assistance Awards

The Adopt-A-Stream Program announces a new process to identify technical assistance needs of Stream Teams and to work with those teams to build capacity, complete projects from their action plan and create opportunities for river protection and recreation. We will solicit project ideas in the form of a letter of inquiry on an ongoing basis with deadlines of November 15, February 15, May 15 and August 15 of each year. Riverways technical assistance staff can work with teams at any time to help develop a project strategy or concept. Please see our webpage www.massriverways.org for more information on this opportunity or contact the Adopt-A-Stream staff with project ideas.

We will choose projects based on the level of in-kind support and commitment from volunteers and local officials and how the project will involve protection/restoration of the resource.

Stream Team Workshop: Sharing Ideas for River Protection Wednesday, Oct. 1st

7-9PM in Middleton at the Fuller Meadow School

The Adopt-A-Stream Program invites you to an evening Workshop on how to implement stream protection projects in your community. Several members of Northeast Massachusetts Stream Teams will present their recently completed projects. Come and learn from their successes, share your stories and network with other Stream Team members.

The workshop is designed as a chance to discuss and brainstorm project ideas both formally and informally with other Stream Teams and Adopt-A-Stream staff. We will discuss how to prioritize and move forward on projects with busy volunteers. This workshop is free, but for planning purposes we ask that you could rsvp by Sept. 26th.Thanks to the Middleton Stream Team for helping plan the workshop. We look forward to seeing everyone there.

Any questions, contact:
Rachel Calabro, 617-626-1549 rachel.calabro@state.ma.us
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Check the Adopt-A-Stream website for more details.

The **Adopt-A-Stream Program** works to support and encourage local stream teams and communities in efforts to protect and restore the ecological integrity of the Commonwealth's watersheds; rivers, streams and adjacent lands.

For more information or to receive our newsletter, please contact:

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Also check out our web-site:
www.massriverways.org

Riverways Programs, Joan Kimball, Director
Department of Fish and Game, David M. Peters, Commissioner
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